

How Big Was It?

Grades: 3 and 4

Length: 60 minutes

South Dakota Content Standards

- ◆ 3rd Grade Math Measurement: Students will estimate and measure length to the nearest 1/4-inch or centimeter.
- ◆ 3rd Grade Math Measurement: Students will measure and compare objects using measurable attributes.
- ◆ 4th Grade Math Measurement: Students will develop strategies to make measurement estimates.
- ◆ 4th Grade Math Measurement: Students will measure length to the nearest 1/8-inch or to the nearest millimeter.

Objectives

Estimate the height and length of prehistoric animals.

Measure the height and length of prehistoric animals.

Observe the size relations between different species and express that relationship mathematically.

Primary Theme

The Badlands fossil and geological record reflects changing climates and the diversity of life; its study provides insight into the survival of species.

Materials

- ◆ Overhead transparencies
- ◆ Overhead projector
- ◆ Meter or yard sticks
- ◆ Butcher paper (optional)

Background

Students often have the image that all prehistoric animals were very large. While many were, there were also many that were not. The ecological niches that can be found today can also be found in the past. Like the animals of today, prehistoric animals came in a variety of sizes and filled all the different niches available to them.

Procedure

1. Photocopy the figures provided (pages 45 through 47) onto overhead transparency sheets.
2. (Optional) Use butcher paper to create a poster big enough to hold the actual size of the animal.
3. Project the image of the animal onto the paper (or onto the wall) with an overhead projector.
4. Adjust the distance between the overhead projector and the paper until the image is close to the animal's actual size. Obviously, there was some variation among real animals so it does not need to be exact. The following is a guideline for the size of the animals:

Archaeotherium (big pig)	.....	5 feet LONG
Baculite	.....	2 feet LONG
Ammonite	.....	2 feet LONG
Oreodont	.....	3 feet TALL
Mesohippus	.....	2 feet TALL
Saber-toothed Cat	.....	6 feet LONG
Brontothere	.....	8 feet LONG

5. (Optional) Students trace the image onto the paper.
6. Students estimate the height and length of the animals.
7. Students measure the height and length of the animals.
8. Have the students complete different measurement activities and compare the sizes of the different animals. Have students estimate fractions and write formulas to describe what they observed.

Additional Information

National Park Service - www.nps.gov

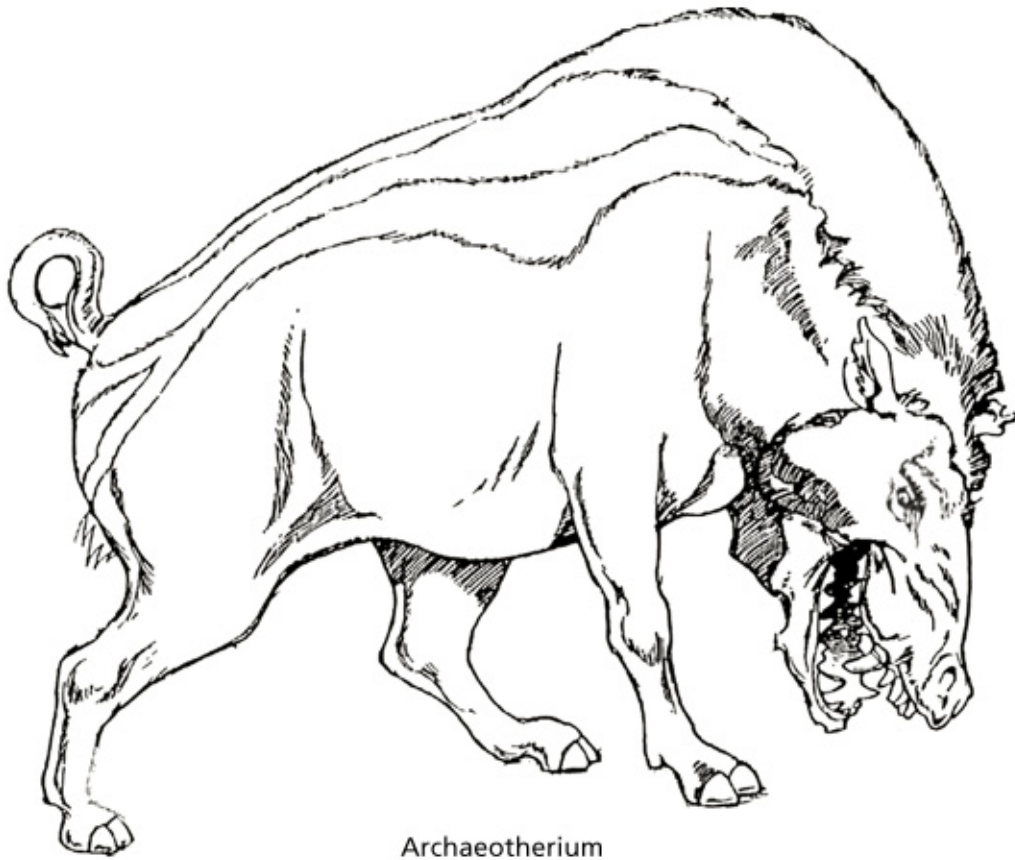
Information on all of America's National Parks. Includes a special section for students and teachers.

Views of the National Parks - www2.nature.nps.gov/views

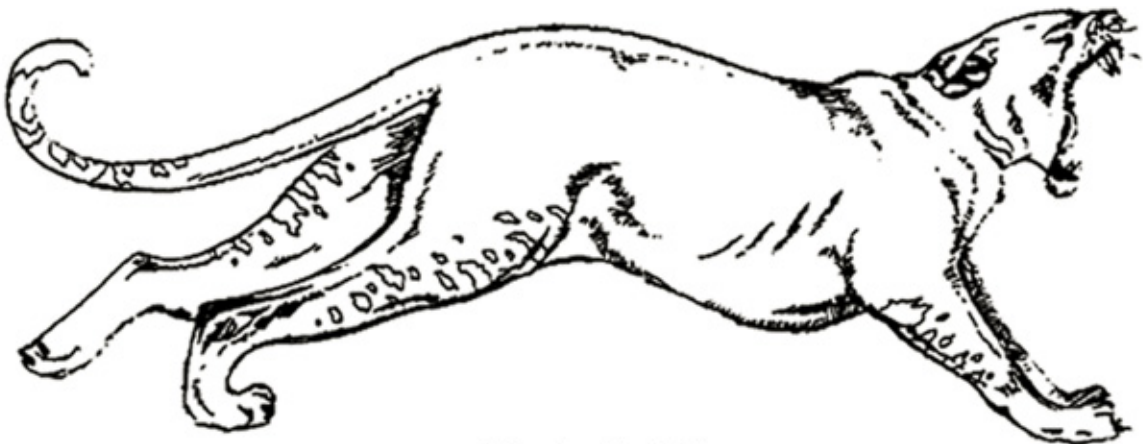
Virtual experiences of national parks and knowledge centers on various natural resource themes.

National Park Service Web Rangers - www.nps.gov/webrangers

Kids can become Junior Rangers from their home or school.



Archaeotherium



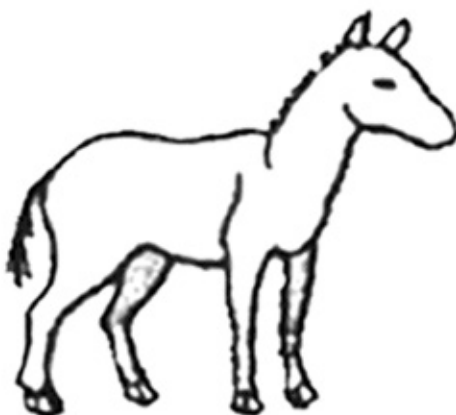
Saber-toothed Cat



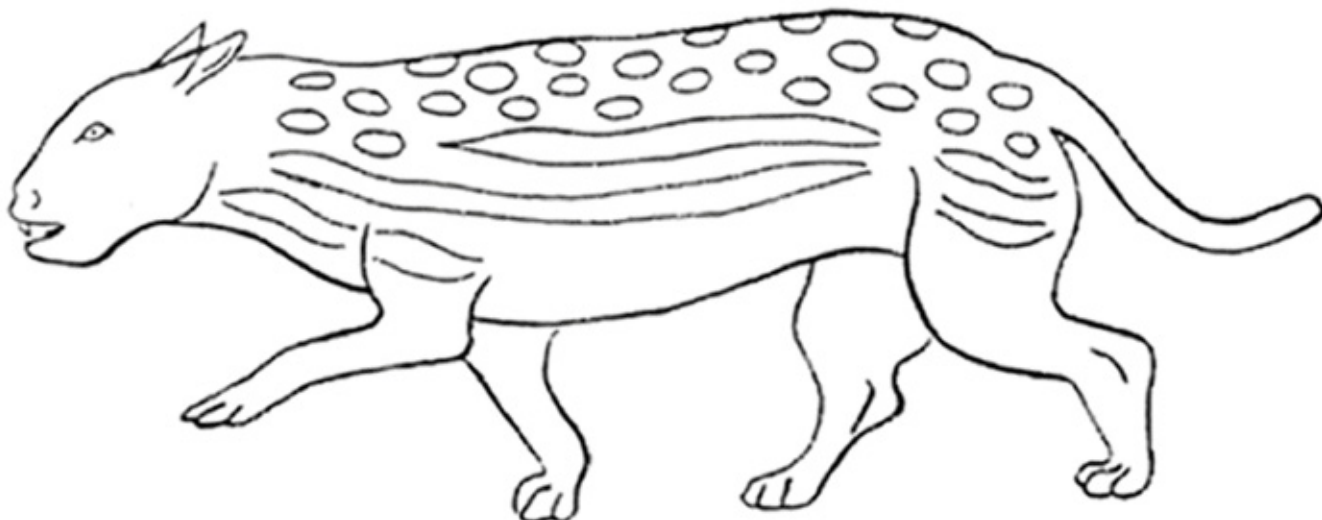
Baculite



Ammonite



Meshippus



Oreodont

